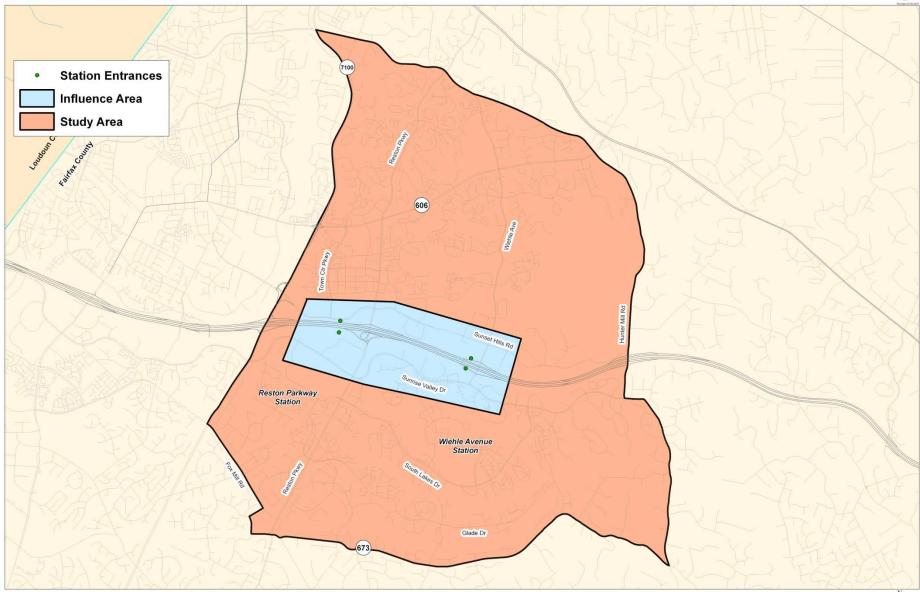


Roadway Facilities

Reston Metrorail Access Group December 4, 2007

Study Area and Influence Area Overview





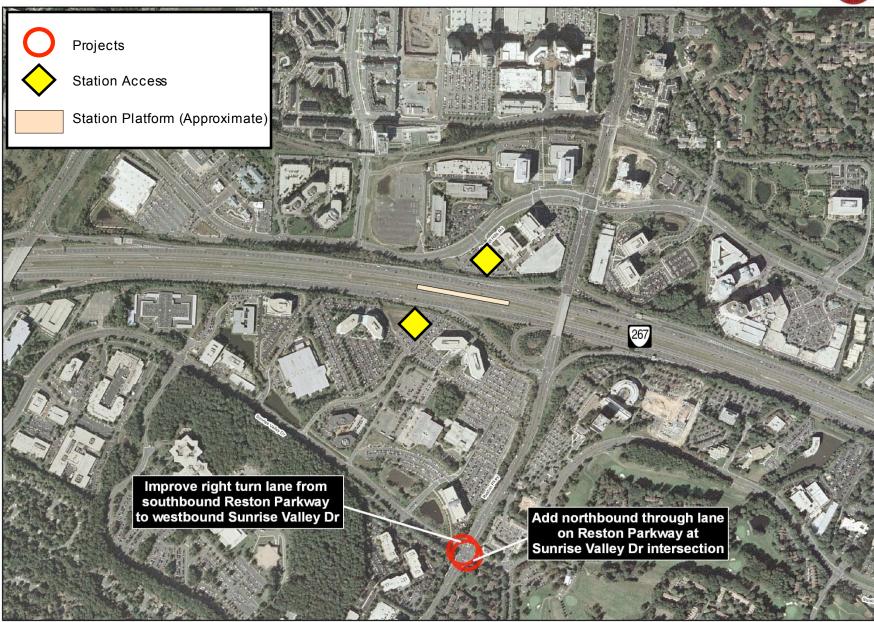


Technical Approach

- 2030 Target Year Metrorail to Dulles Phases I and II in Place
- MWCOG Round 7 Land Use
- Fairfax County Travel Demand Model
- VISSIM Simulation Analysis
- Record of Decision (ROD) Improvements
 Assumed to be in Place for 2030 Baseline
 Analysis

Transportation Facilities for Mitigation in Station Areas (Reston Parkway Station)

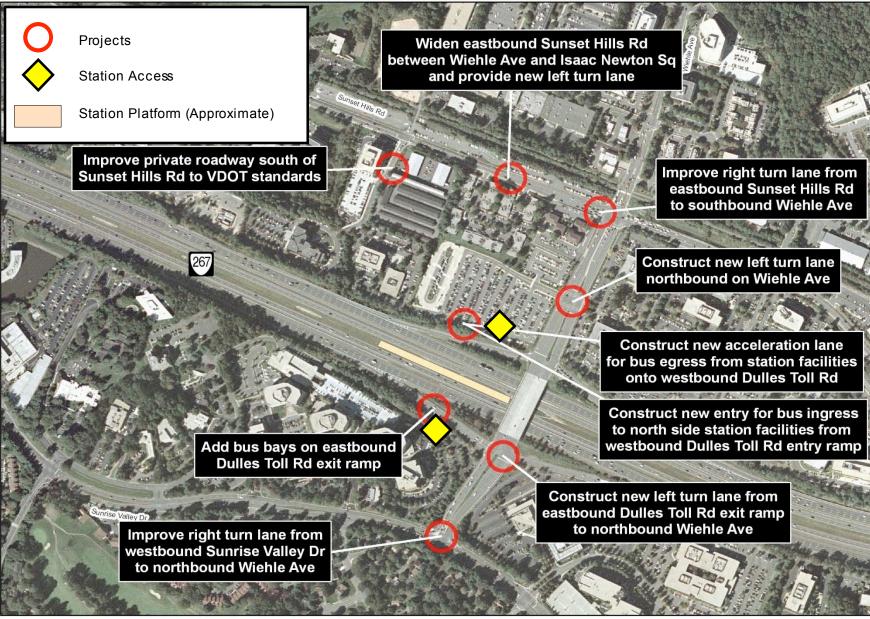






Transportation Facilities for Mitigation in Station Areas (Wiehle Avenue Station)



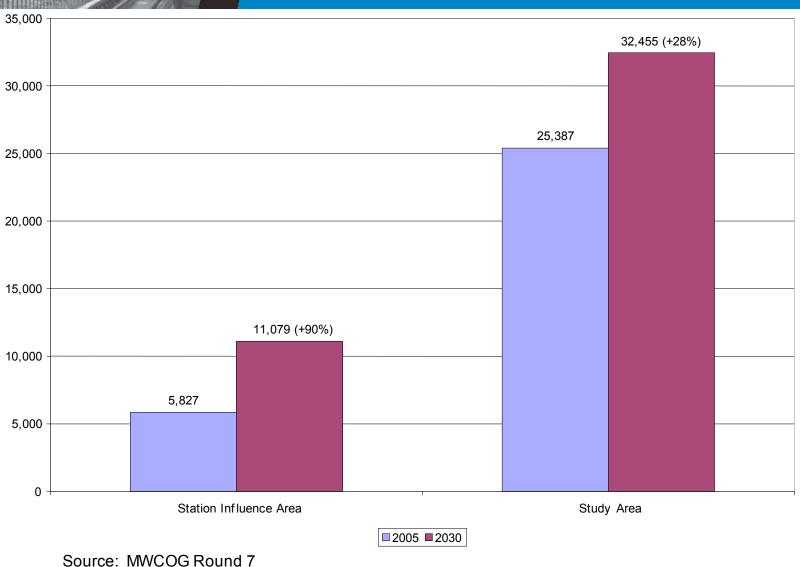






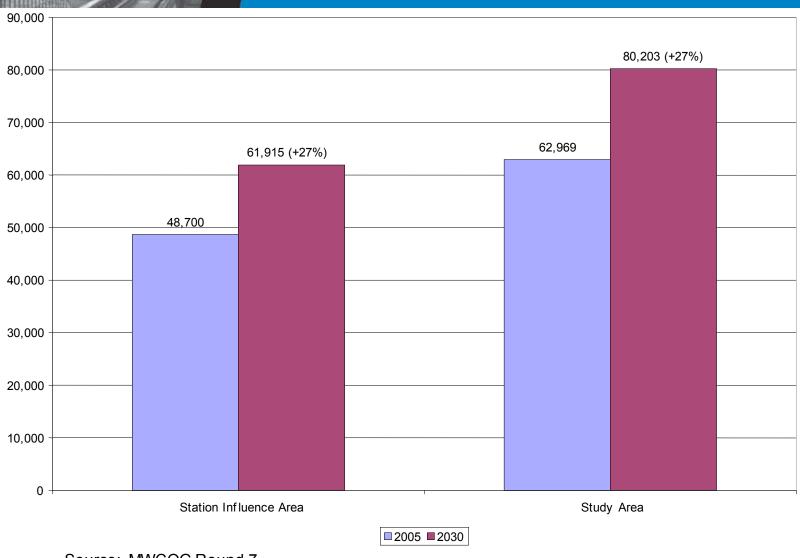


Household Growth from 2005 to 2030

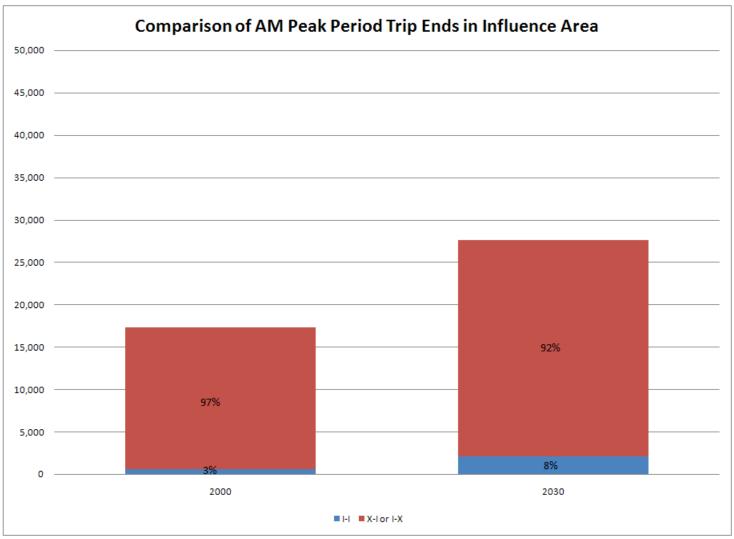




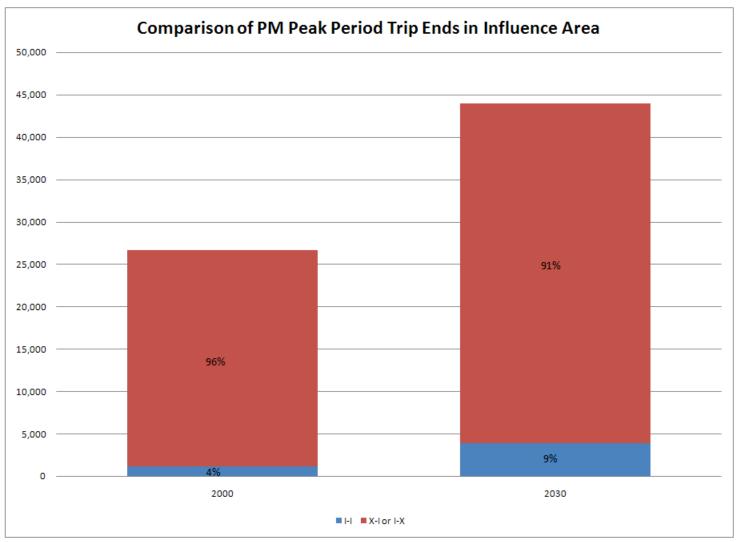
Employment Growth from 2005 to 2030



Source: MWCOG Round 7



	Year 2000	Year 2030	%Growth
I-I	572	2,127	272%
I-X or X-I	16,782	25,499	52%
Total	17,354	27,626	59%



	Year 2000	Year 2030	%Growth
I-I	1,144	3,850	237%
I-X or X-I	25,526	40,055	57%
Total	26,670	43,905	65%

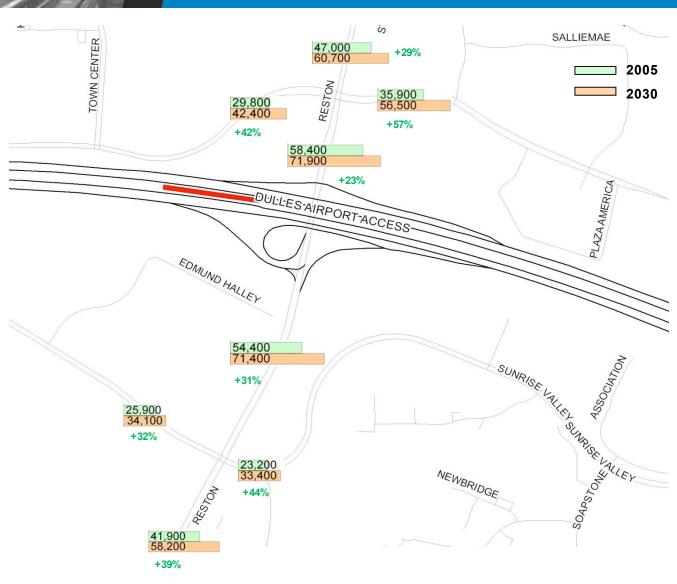


Traffic Projection Approach

- Create Focused Subarea Model within Fairfax County Model
- Develop AM and PM Peak Period Trip Tables for Subarea
- Post Process Raw Model Assignments
- Maintain Consistency with Previously-Published Peak Hour Projections for Wiehle Station Area
- Develop Projections of Park & Ride, Kiss & Ride and Bus Traffic

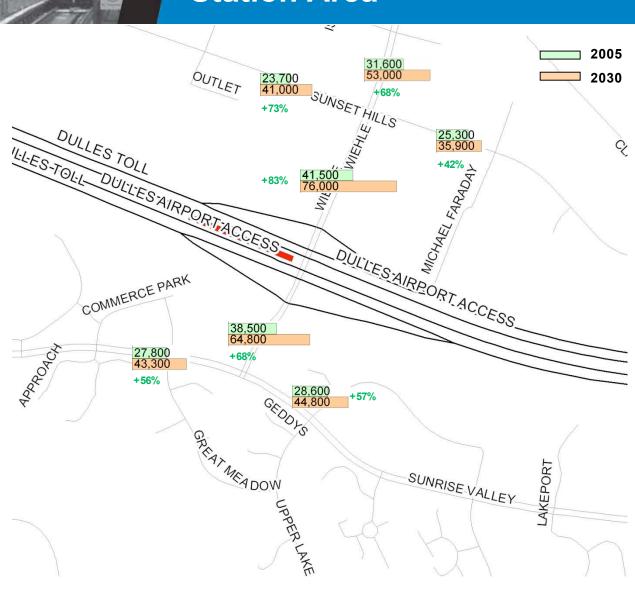


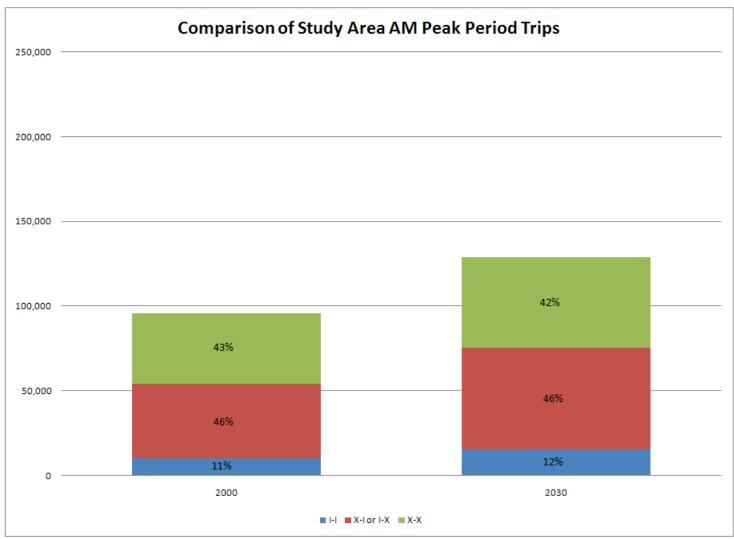
ADT Growth from 2005 to 2030 in Reston Station Area



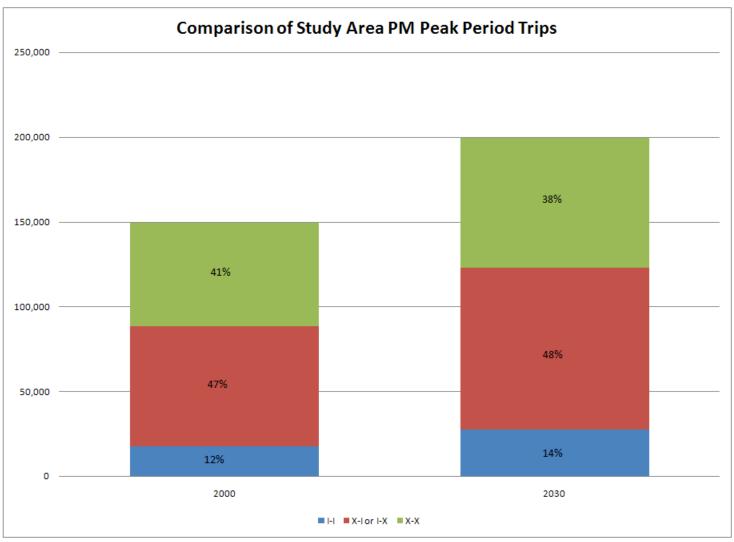


ADT Growth from 2005 to 2030 in Wiehle Station Area





	Year 2000	Year 2030	%Growth
I-I	10,129	15,651	55%
I-X or X-I	44,170	59,633	35%
X-X	41,549	53,583	29%
Total	95,848	128,867	34%



	Year 2000	Year 2030	%Growth
I-I	17,708	27,417	55%
I-X or X-I	70,457	95,591	36%
X-X	61,305	76,407	25%
Total	149,470	199,415	33%



VISSIM Traffic Operations Analysis

- State-of-the-Art Analysis Algorithms
- Simulates Traffic Flow through Roadway Network
- Explicitly Considers Pedestrian & Bus Movements
- Produces Wide Range of Performance Measures



Peak Period Level of Analysis

- Allows for Analysis of Peak Spreading
- Analyzing Peak Period Demand vs.
 Capacity on Roadway Segments and at Intersections
- Detailed Peak Hour Intersection LOS Measures Not Being Evaluated at this Stage
- Intersection Throughput vs. Demand Being Used to Identify Problem Areas and Evaluate Improvements in Station Influence Area



Future Challenges

- Growth in Traffic and Increased
 Pedestrian Travel in Station Areas Strains
 Intersection Operations Roadway
 Segments Generally Have Adequate
 Capacity
- Traffic Congestion Affects Bus Operations
- Need to Balance Vehicular vs.
 Pedestrian/Bicycle/Bus Demands



Pedestrian Benefits

- Improved Pedestrian Network:
 - Enhances pedestrian mobility and accessibility, which encourages walk trips and can reduce short vehicle trips
 - Enhances pedestrian safety (reduced jaywalking and better pedestrian visibility)
 - Signal Cycles have been Adjusted to Accommodate Pedestrian Demand



New Connection: Town Center Parkway to Sunrise Valley Drive

Adds new gradeseparated connection from Town Center Parkway over Dulles Toll Road to Sunrise Valley Drive.

Connector would be constructed to VDOT standards.





Sunset Hills Rd & Town Center Pkwy

Signal Controlled



New connector will require significant grade change to existing intersection (lower elevation)











Reston Parkway - Add lane to tie to Dulles Toll Rd Ramp



Tie new lane into existing lane on Dulles Toll Road ramp.

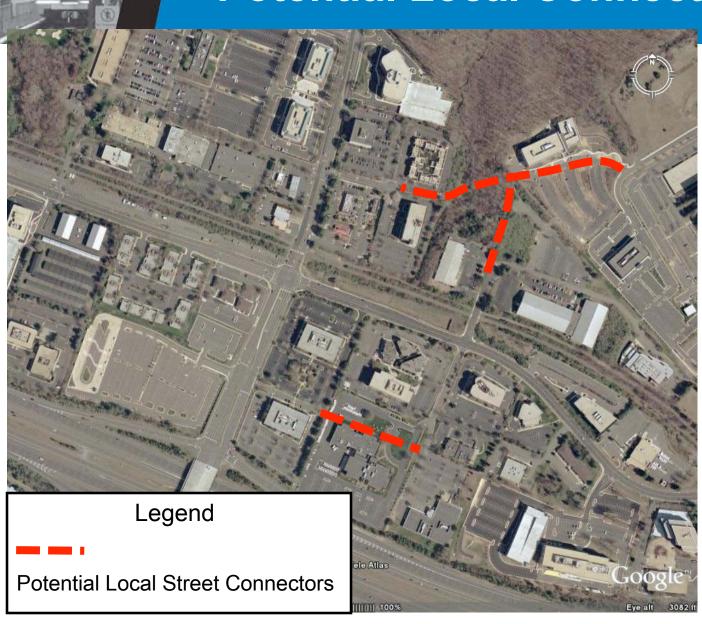


New Connection: Isaac Newton Sq West to Sunrise Valley Drive

Adds new gradeseparated connection from Isaac Newton Sq West over Dulles Toll Rd to Sunrise Valley Drive as secondary access.



Potential Local Connectors





Effects of Roadway and Pedestrian Improvements

- Pedestrian Demand is Accommodated
- New Connector Roads Across Toll Road Improve Connectivity for Local Travel and Access to Stations
- Town Center Parkway Connector Could Have Negative Impacts on Pedestrian/Bicycle Users
- Increased Vehicular Network Throughput:
 - +10% during AM peak period
 - +45% during PM peak period



Additional Potential Improvements to Test

- New Local Street Connections in Station Influence Areas
- Modified Local Bus Routes to Avoid Congested Roadway Segments/Intersections
- Sensitivity Test of Travel Demand Management Effects
- RMAG Feedback